



Bearded and Smiling



Three members of MSC's Flight Crew Support Division were all smiles Thursday afternoon after spending 125 hours in spacecraft 2TV-1 inside Chamber A of the Space Environment Simulation Laboratory. Clad in parkas and wearing the 'super beta' coveralls, the crew members are l-r: Majors Lloyd Reeder, Turnage R. Lindsey and Alfred H. Davidson.

Crew Exits 2TV-1 After 125-Hour Test

The crewmen from the Manned Spacecraft Center's Flight Crew Support Division completed a five-day vacuum chamber test September 9, in a spacecraft similar to the command and service modules to be flown on the second manned Apollo mission and on flights to the moon.

Major Turnage R. Lindsey, USAF; Major Lloyd Reeder, USAF; and Major Alfred H. Davidson, USAF, emerged at 4 p.m. from spacecraft 2TV-1 inside chamber A of MSC's Space Environment Simulation Laboratory and were pronounced in excellent condition after their simulated space flight.

Robert Bobola 2TV-1 Project Engineer said the spacecraft performed well throughout the five-day test. A significant achievement of the test, he said, was the successful operation of the new unified side hatch in a simulated space environment.

Crewmen Lindsey, Reeder and Davidson depressurized the spacecraft cabin during the second day of the test and opened the hatch. Some two-and-a-half hours later they closed the hatch and repressurized the spacecraft without difficulty.

The crew remained out of their pressure suits in a shirt-sleeve environment during most of the test despite temperatures on the outside surface of the spacecraft ranging from 150 degrees above zero to 150 degrees below zero Fahrenheit.

The test was the second for spacecraft 2TV-1 since its arrival at MSC in April 1968. Astronauts Joseph Kerwin,

Vance Brand and Joe Engle participated in an eight-day test of the vehicle June 16-June 24, helping clear the way for the first manned Apollo flight.

Chamber A, a 120 foot high, 65 foot diameter stainless steel tank, maintained a vacuum equivalent to space more than 100 miles from earth during most of the test. Carbon-arc solar simulators on the top and one side of the chamber provided heating equivalent to that encountered in space flight while liquid nitrogen cooled the walls of the chamber to simulate space cold.

NASA Terminates H-1 Production

The National Aeronautics and Space Administration has terminated production of H-1 engines under contract with the Rocketdyne Division of North American Rockwell Corp., Canoga Park, Cal.

Of the 60 engines being produced, the Rocketdyne Division has completed delivery on 32 to the NASA Marshall Space Flight Center. Of the remaining 28 engines to be delivered, one will be complete, one will be complete without firing, six will be assembled, and the hardware for the other 20 will be delivered in the present production state. The 205,000-pound thrust H-1 is used in the booster stage of the Saturn IB rocket.

This purchase of H-1 engines was originally intended for use in missions following the Apollo manned lunar landing.

Purser to U of H Johnston Fills Slot

Robert R. Gilruth, Director of the NASA Manned Spacecraft Center, announced today the Center is granting Paul E. Purser, Special Assistant to the Director, a one year leave of absence to assist Dr. Philip G. Hoffman, President of the University of Houston.

Richard S. Johnston, Chief of MSC's Crew Systems Division, will serve as Special Assistant to the Director during Mr. Purser's year of absence. Robert E. Smylie, who is presently Assistant Chief for Apollo Support, Crew Systems Division, will serve as Acting Chief of the Crew Systems Division.

In announcing Mr. Purser's leave of absence, Dr. Gilruth noted that it is NASA policy to cooperate with the Nation's universities in every way possible in order to realize maximum benefits to both NASA and the academic community.

In view of Mr. Purser's abilities and long-time interest in university affairs, Dr. Gilruth said NASA has agreed to this leave of absence.

Mr. Purser will begin his duties as Special Assistant to President Hoffman on October 1, 1968.

Prof. Cole to Speak On Air Pollution

Dr. LaMont Cole, Professor of Ecology at Cornell University, is the September speaker at the monthly Science and Applications Directorate's seminar.

Dr. Cole, who is one of the nation's leading experts on air pollution, will speak on "Man's Impact on Nature." He will talk at 3:30 p.m. on September 23 in the Building 1 Auditorium.

LAUNCH NEARS—

Apollo VII CDDT Begins; Pad Egress Completed

A six day long Countdown Demonstration Test (CDDT) for Apollo VII was scheduled to begin at Kennedy Space Center at ROUNDUP press time. Flight controllers in MSC's Mission Control Center will support the test, preliminary for the mid-October launch of Apollo VII.

Earlier this week, the prime crew and backup crew participated in an egress test. During the test the astronauts went through both an aided and unaided egress from the spacecraft under simulated emergency on-the-pad conditions.

During the first portion of the CDDT a complete countdown will be conducted by the launch

team, including fueling of the Saturn IB. Astronaut participation in this phase will be simulated.

Following the wet countdown, the final portion of the count will be rerun, simulating fueling, and the astronauts will participate. The entire test is scheduled to take some six days.

Additional prelaunch preparations and testing for Apollo VIII was being conducted at the Cape. Early this week a launch vehicle flight control frequency response test was conducted. At midweek guidance and control checks were scheduled and launch vehicle malfunction overall test was planned for the end of this week.

"FORWARD THRUST" —United Fund 1969

To all MSC employees:

The 1969 United Fund Drive for the Manned Spacecraft Center will be an intensified campaign from October 1 through October 30, 1968. The theme of this year's Drive is "Forward Thrust."

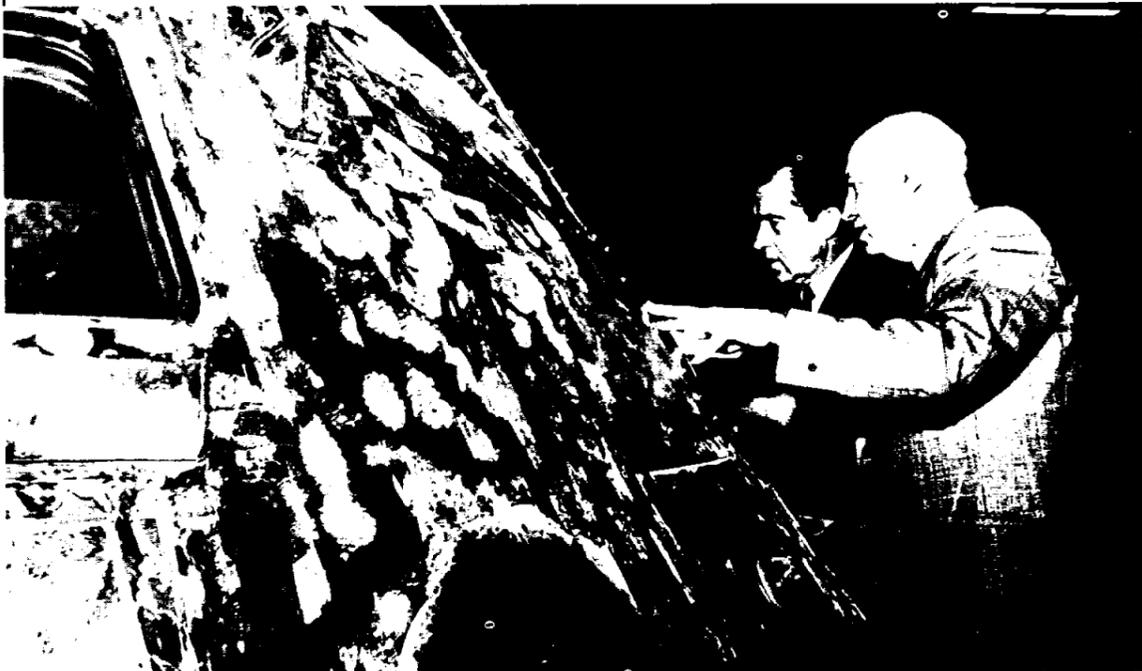
Each year the MSC Personnel have achieved 100 percent or more of our assigned goal. It is my desire that MSC employees once more contribute to this deserving campaign as liberally as possible.

It has been through your wholehearted support of this worthwhile program that we have met our goals in the past. Again we will need your full cooperation to meet the goal of \$70,000.00 for 1969.

The team captain in your area will be contacting you to request your donation or pledge. With the support of you and your fellow employees, MSC will once again meet its quota.

Robert R. Gilruth
Director, MSC

Presidential Candidate Visits MSC



FORMER VEEP VIEWS Apollo 17 spacecraft. MSC Director Robert R. Gilruth explains scorched exterior of Apollo Command Module 017 which was flown during the first unmanned Saturn V mission in November 1967, to Richard M. Nixon Republican candidate for President. Mr. Nixon toured MSC on September 6 before starting his Houston campaign. In addition to viewing the exhibits in Building 1 auditorium, Mr. Nixon received a comprehensive briefing on a lunar mission by Christopher C. Kraft, Director of Flights Operations.

Making Their Opportunities



YOUTH AT WORK—Youth Opportunity Campaign counselor Erma Evans (center photo) holds a group session with some of the 89 youngsters who were hired at the Houston Job Fair to work during the summer at MSC. She is a teacher at M. C. Williams high school and was on the MSC Personnel Division staff for the summer months. At work, clockwise from top left, are: Jacqueline Gosey, a B. C. Elmore senior, operating a calculator in the Computation and Analysis Division; San Jacinto high senior Phillip Yee soldering a circuit in Technical Services Division Field Test Branch; Charles Goodie, San Jacinto senior, in the TSD Sheet Metal and Welding Branch; San Jacinto junior Guadalupe Garcia operating a keypunch machine in Computation and Analysis Division; Joyce Spiller, Worthing high senior, CAD secretary; and San Jacinto tenth grader Juan Castillo in the TSD Model and Plastics Shop. All the students returned to school for the fall semester.

Lu-Wow Queen Contest Feature of EAA Picnic

Gals, would you like to reign as Queen for a day of the Lu-Wow?

If so, have your boss, boy friend or the fellow at the next desk enter you in the Lu-Wow contest. All MSC and contractor girls are eligible.

Photos of nominees should be submitted to Jerry Haptonstall (BG 931) and a "blue ribbon" panel will select the finalists. The Queen, along with five Lu-Wow princesses, will be crowned at the annual Employee Activities Association picnic on Oct. 19 at the Galveston County Park.

The Lu-Wow Queen will pick her King. The lucky King will be selected from the group of fellows whose photos have been submitted to Haptonstall.

Tickets may be purchased from your EAA representative beginning September 15. Don't forget the date—Oct. 19—and the place—Galveston County Park—and the time—10 a.m. to 6 p.m.

Accident Info Sought

Anyone who witnessed accident on Red Bluff Road at 4 P.M. on August 20 are asked to contact Dr. John Dornbach at 877-4198.

Concert Society Tix Available for Season

The Coastal Concert Society opens its season on Sept 21 with the Chamber Choir of the San Antonio Symphony.

Season tickets are available \$7.50 single and \$20 family memberships. For further information contact Mrs. Robert Inglis 877-4740 or Mrs. Alec Bond 877-4103.



Friday—the 13th

If nothing goes right today and one gets the feeling that he "shouldastoodinbed," it can all be chalked up to what day it is.

Perhaps a calendar reform will be in order at the millennium.

Pasadena Stage Group Schedules Williams Play

The Auxiliary Propulsion and Pyrotechnics Branch of Propulsion and Power Division has scheduled a theatre party at the Pasadena Little Theatre on September 21.

The PPD employees have "bought the house" for Little Theatre's production of Tennessee Williams' comedy "Period of Adjustment." Mrs. Jo Simmons, wife of MSC's Bill Simmons, is director of "Period of Adjustment."

Performance of Williams' comedy are scheduled each Friday, Saturday and Sunday beginning September 13 and running through October 6. Ticket information may be obtained by calling Bill Simmons (ext 5371) or the Little Theatre 946-9976.

The Roundup is an official publication of the National Aeronautics and Space Administration Manned Spacecraft Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for MSC employees.

Director Dr. Robert R. Gilruth
 Public Affairs Officer Paul Haney
 Editor Terry White
 Staff Photographer A. "Pat" Patnesky

Your Job in Focus

MONDAY HOLIDAYS

Recently enacted Congressional legislation provides that three of our national holidays will be celebrated on Monday, commencing in calendar 1971 as follows:

- Washington's Birthday on the third Monday in February
- Memorial Day on the last Monday in May
- Veterans Day on the fourth Monday in October

The law also established Columbus Day as a Federal holiday to be celebrated on the second Monday in October. Thirty-four of our states have already established a day honoring Christopher Columbus. The provisions of this law ensure a minimum of five regularly recurring 3-day weekends each year for Federal employees. The costs are expected to be offset to any important degree by avoiding disruptions of government business through Monday observance of holidays. The reason for the delayed effective date is so that state legislatures will have time to act for observances in local government offices and in private employment.

INDEBTEDNESS

The Standards of Conduct for NASA Employees, NHB 1900. 1A, October 1967, prescribes the following with regard to payment of debts by Federal employees:

"The indebtedness of NASA employees is considered to be essentially a matter of their own concern. NASA will not be placed in the position of acting as a collection agency or of determining the validity or amount of contested debts. Nevertheless, NASA employees are expected to honor in a proper and timely manner, debts which are acknowledged by the employee to be valid or which have been reduced to final judgment by a court, or to make or adhere to satisfactory arrangements for the settlement of such debts. Employees are also expected to meet their responsibilities for payment of Federal, State and local taxes."

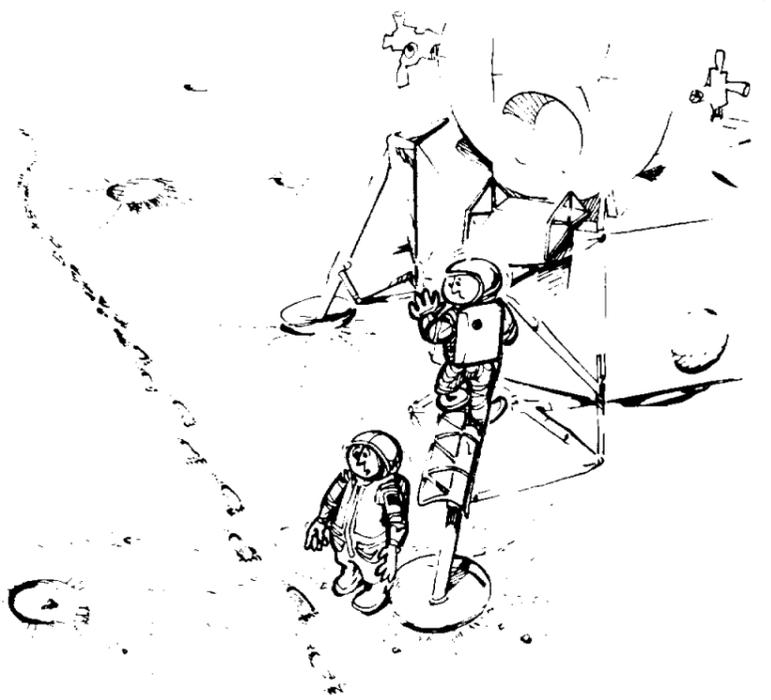
The above wording "in a proper and timely manner" means in a manner which NASA determines does not, under the circumstances, reflect adversely on NASA as the employing agency.



Your favorite Uncle asks you to buy U.S. Savings Bonds, new Freedom Shares

THE ASTRONUTS

(filched from TRW Systems Group)



Roundup Swap-Shop

(Deadline for classified ads is the Friday preceding Roundup publication date. Ads received after the deadline will be run in the next following issue. Send ads in writing to Roundup Editor, AP3. Ads will not be repeated unless requested. Use name and home telephone number.)

FOR SALE/RENT—REAL ESTATE

8-month old French Provincial in Baybrook: 4 bedrooms, separate dining room and living room, large family room w/fireplace, kitchen and dinette, utility room and separate two-car garage with fenced backyard, refrigerator, washer, dryer, and miscellaneous furniture included, central air/heat, located on court, away from main traffic and apartments. Cost \$25,000 equity and assumption. Dave Peterson, GR 4-3681 after 5.

Rent by day or week, 1 bedroom furnished beach house, all electric kitchen, at Bolivar. Has boat dock in front. Evelyn Hugar, HU 3-7626 (no home phone).

El Lago—407 Pebblebrook Dr., wooded lot, 3-1/2-2, functional storage, screened porch, Howard swimming pool, beamed-ceiling family room, fireplace, beautifully draped, brick and white aluminum siding, many other extras. Owner day or night GR 4-2741 or 877-1051. Immediate occupancy.

4-bdr, 1 1/2-bath, 2-car garage, family room, electric kitchen, central heat/air, carpets, \$21,000—\$2,000 down, 6 per cent interest, take over payments. 1902 Sunset Court North, League City R. Longnau, 932-3187.

Fairmont Park, 3 bedrooms, 2 baths, 2-car attached garage, full brick, air/heat, roomy eat-in kitchen with much wood cabinetry and all built-ins, paneled den, living room, ceramic tile baths, clay tile foyer, hardwood floors, all venetian blinds. Mature trees and shrubs, fenced backyard, high ground. 20 min. to NASA, 10 to shopping, walking distance to school, corner store, and free pool. Community services include back yard garbage pickup, police patrol, etc. Cash for equity and assume balance of 5 1/2% FHA loan. Payments \$131 a month. Frank Miceli, GR 1-0723.

El Lago, 3 bedrm, 2 bath, den, dbl garage, 1,850 sq. ft. living area. \$23,900, 6 1/4% loan balance: \$18,000. Call 877-2238.

House for rent: located in Clear Lake City, 3 bedrms, 2 baths, carpeted neighborhood, full recreational facilities. Available Sept. 15, 944-3592.

Two wooded lots, near waterfront-1000 ft. pier and park one block from lots. New elementary school one block, bus for high and junior high stops in front of Bayside Terrace off Hwy 146. Fay Permenter, GR 1-4659.

4-2 1/2 English style home in El Lago. Separate living room dining room. Large family room with working fireplace and builtin book cases. Kitchen has all builtins and abundance of cabinets, morning room, utility room, oversize and walkin closets, completely fenced and landscaped, wall to wall carpeting throughout and custom drapes included. 877-1152.

For Rent 2 bedrm, unfurnished garage apartment with carport. Paneled den and lots of closet and cabinet space. Air/heat, water paid. Spencer Hwy, between Fed Mart and Huntington Division. E. M. Kuykendall, HU 7-2888.

For sale or trade: well-kept home with swimming pool in Cocoa Beach, Florida. 3 bedrms, 2 full baths, living room, dining room, family room, breakfast room, separate inside laundry room, kitchen with Frigidaire oven, range, dishwasher and disposal, entrance foyer, double garage, central air and heat, carpets and drapes, less than 2 years old. Pool is large and completely screened. Yard is landscaped and has sprinkling system. Back yard is fenced. Priced at \$33,500 with an equity of approximately \$8,500. Interest rate 6 1/2%. Will consider trade for comparable property in Houston NASA area. Call 877-1037 or 591-5333.

Sun Valley, 3-2-2, full brick, central air/heat, large paneled family room with built-in book cases, built-in appliances, yard landscaped, available for immediate occupancy. D. Puddy, 944-4796.

House for rent: 3 bedrooms, 2 full baths, covered patio, 2 car garage. 1 block from elementary school. Located in Sun Valley area (Edgebrook exit on Gulf Freeway). Call George A. Nixon, HU 3-3758.

FOR SALE—AUTOS

54 Pontiac Tempest Custom 4-door sedan, 326 V-8, automatic, air-conditioning, new brakes, new shocks, 2 new tires, original owner, \$1,250. J. O. Covington, 487-3066.

61 Chev Pickup—Fleetside LWB—radio new paint, tires, \$650; canopy—insulated for pickup, \$100. Gordon Pulliam, HU 8-2250.

57 MGA—Good looking paint and body. Engine has new overhaul. Red with white top. Asking \$500. Tom Chase, 591-2752.

65 Chevy Super Sport, bucket seats, console, 327 c.i. V-8, automatic, power, air, sim wire wheels, excellent tires, grey with black vinyl top, black vinyl interior, like new. \$1800. Jerry Bostick, 591-2289.

56 Packard 4-dr. Patrician, needs work, most of the parts on hand. \$100 as is. 1955 Chevrolet parts, transmission, generator, water pump (make offer); 1960 Renault, rebuilt head, valves and springs. Paid \$45 (make offer). John C. Fischer, Jr., GR 2-6910.

65 Volkswagen, blue, extra clean, low mileage, has 3,000 mile warranty. Judy Atchison, 575-1008, Baytown.

57 Chevy, 2-door hardtop, mint condition, \$2,000 invested, sell \$950. 944-1321.

59 Ford 2-door station wagon, R & H, original owner, \$395. S. Robinson, 729-8172.

67 VW Campmobile, air conditioned, 19 miles per gallon, pop-up top, side tent, luggage rack, ice box, radio, heater, white-walls, sleeps 4 adults and 2 children, excellent condition, sold new for \$3800 last September. Will sell for \$2800. L. J. Corcoran, 944-9902.

65 Rambler Classic 660, six cylinder, standard shift (gets 18 miles per gallon); very clean, low mileage (36,000), four door sedan with fold-down seats; good white sidewall tires; excellent running condition. Book value: \$1,095. Oscar Bernard, 487-3697.

67 Pontiac Sports Ventura, fully equipped, low mileage, call after 5:30 p.m. Nassau Bay 591-2260.

68 Impala sports sedan, 5,000 miles, 327 engine, Turbo etc. Paul Weitz, 591-3071.

68 Chevrolet Impala Hard Top, Bill Pogue, 877-2497.

65 Corvette Convertible, 327-350, 4 speed, AM/FM, air, positraction, power disk brakes, \$2495, T. White, 488-3409.

65 Chrysler 4 dr. Newport Town Sedan, exceptionally clean, all power and air, electric windows & seats, \$1,695. Phyllis Morton, 946-4752.

64 Pontiac Safari station wagon fully equipped, A-1 condition. \$1,150. Marlow, 946-3497.

67 Olds Cutlass Supreme with turnpike cruising package, heavy-duty suspension, 400 cu. in., 2.41 rear end, 3-speed Turbo-hydraulic, solid state ignition, auto speed control, air, disk brakes, power steering, anti-spin diff., Firestone radial tires, all are factory installed options. Excellent condition, 26,000 miles, in warranty. New \$4200, now \$2700. Mike Thomas, HU 3-2301.

60 Renault, runs good, ideal work car. New clutch, brake job. \$150. Call HU 2-1326.

67 Impala super sport, gold/black vinyl, air, all power, 22,000 miles, \$2250. Eugene A. Cernan, 591-2383.

Station wagon, 63 Rambler Classic, A/T, air, luggage rack, clean. \$495. Klaves, 471-0928.

Last of the breed—classic British race car, vintage 1938, TA series MG. RH steering, wooden dash, strapped bonnet, motorcycle fenders, 19" spoke wheels, racing tires. "Blown" version of car clocked at 200 mph. Woodland Green with eggshell canvas top. Extremely rare and mint condition. Best offer over \$2500. E. Herton, 877-4102.

64 Buick Skylark—extra clean, sharp, green with white top. Radio, AC, WW—\$1400. E. Horton, 877-4102.

62 Plymouth Valiant, air, automatic, new tires, good work car. \$350. Ted Guillory, 472-8208.

62 Buick Special Wagon, V-6 engine, automatic transmission, 3-seat (7 passenger), economical, excellent condition. Nolan Guillot, HU 7-0391.

Morris Minor 2-door sedan, excellent condition, over 30 miles per gallon. Must sacrifice for \$300. I need money for college. Call Don Schalk, 935-2948 (LaMarque) after 4 pm.

65 Dodge Dart station wagon—2-tone, 225 "6" engine, automatic, radio, heater, air conditioning, tinted windows, power rear window, 31,000 miles, excellent condition. \$1,050, call Bill Silber, HU 8-3530, ext. 2767.

FOR SALE—MISCELLANEOUS

1964 Corvette Positraction rear axle assembly, complete w/traction bars, suspension assy, wheel hubs, brakes, etc. \$115. Also Corvette dashboard (all instruments except radio) \$45. Ron Hagood, WI 8-2870, Texas City.

1 pair \$18 dark men's dress slacks, waist size 44, length to fit 6' man. Cleaned once. Sell \$10. Evelyn Hugar, HU 3-7626 (no home phone).

Black female—miniature toy poodle—AKC, 30 champions, 5 generations, \$75. HU 2-7012 after 5.

Martin Busine Bb clarinet. Needs some work. \$40. Also, Getzen Bb bass clarinet, excellent condition. \$150. Both for \$175. One music stand thrown in free. Linda Bennett, MI 9-3576 after 8 pm. Anytime Saturday & Sunday.

305 cc Honda, 1962 Superhawk, excellent condition. Best offer. E. Beck, 946-3702.

Spanish dining room set, party height table, octagon shape, extra leaf. Six chairs black leather (naugahyde) will sell 4 or 6 chairs; large occasional chair with loose pillow in back (very comfortable and oversized), bedroom suite, heavy mahogany high gloss finish with brass handles, antique look, double dresser, chest, night stand and bed (no mattress & springs); large paintings (oil), magazine rack, wrought iron Spanish. Faye Permenter, GR 1-4659.

12 year old Bay Mare, very gentle, good children's horse, \$150. Phone 658-8136.

Twin bed, 39" x 75", Sears, Harmony House innerspring foundation (216 coils) and mattress (216 coils); extra firm. Complete with wooden legs. \$50. Uel S. Clanton, HU 2-7187.

New Shelton blender for sale. Never been used, 2 speed, \$20. Helen Lovell, 946-8205, after 5.

Sailboat, 20 foot cabin sloop, fixed keel, dacron main and jib, fiberglass over cypress hull with maghogany decking. All in excellent condition. \$995 with many extras. Chuck Sirmans, 932-5479 after 5.

16 ft. Lone Star Aluminum boat (commander) with Merc 200/20 h.p. engine and tilt trailer, \$400. Bob Burt, 591-2117.

Hemifair tickets: 2 bonus books with 2 gate admissions, \$9 each. 1 bonus book with 1 gate admission, \$5.75. 2 children's bonus books, \$2.50 each. 944-4895, Ed Wheeler.

Heath Kit guitar Amp., 60 Watts, 2 channels, reverb & Tremlo 2 1/2-inch speakers, \$75. 21 inch Motorola console television, \$25. Bob Burt, 591-2117.

Umbrella type clothesline, Whirlpool refrigerator, electric range, washing machine, chests of drawers, rug and pad (9x15), single beds w/springs and mattresses, portable Singer sewing machine, knitting machine, yarn. Mrs. Robinson, 944-6834.

19" TV, Emerson portable in very good working condition, \$25. Call E. Rubenstein, (Kemah) 877-3288.

Saluki (Persian Greyhound) male puppies for sale \$200 or best offer. World champion bloodline, A.K.C. registered. Sire: Dajim el Saraje, V II in Germany, Dam: Champion Basara v. d. Hunigenburg. Both imports. Dam has never lost any dog show. Gunter R. Sabionski, GR 1-1914 after 6 p.m.

Riding lawn mower, 4 hp Briggs-Stratton engine, 24 inch cut. Used only two summers. Good running condition. \$95. W. E. Teasdale, HU 2-7801.

Guitar, 1929 National all metal body. Restored. Forerunner of the famous Dobra guitar designed by the Dapera brothers. Collectors item. \$100. C. Pollard, WI 8-8756 Texas City.

2 1/2 hp Mini-Bike, perfect condition, 5 months old. Original price, \$187. Will sell for \$100. Phone 944-4960 after 5.

Reddish-brown completely hand-tied human hair wig. Never worn; in carrying case; original cost \$140. Will sell for \$85 or best offer. Call Leota at MI 3-3141 evenings.

Two pair custom-made lined draperies in beige nubby fabric, excellent condition. Sizes 121" wide by 94" long and 82" wide by 94" long. One traverse rod, heavy duty minimum length 108". Will sell separately or together, total price \$60. Early American desk, single pedestal, four drawers, plate glass top, with matching chair. Good condition, \$50. White, 488-1024.

25-foot fiberglass sailboat. Coronado 25 racing-cruising sloop. Berths for five, completely equipped, exceptionally clean. Call Wheeler, 877-4520, evenings.

66 Honda Superhawk, \$400 or best offer. Wes Westmeyer, HU 8-1533.

2.5 KVA, 115 volt, 60 cycle, Koehler water cooled marine lighting plant, used, \$350, Andrew Lamache, Ext. 3571.

Cornet, King Tempo, excellent condition, case included. Appraised at \$125, asking \$85. Ida Marth, HU 3-2187.

20" rotary mower, 2 1/2 horsepower, used three summers, starts and runs well, \$15. W. Speier, 591-2263.

Drum set for sale. Must sell, in good shape. Will sacrifice. Terry Watson, 946-4703.

Circular pool table, about 57 inch diameter; complete with 2 cue sticks, balls, and rack, \$60. Schultz, 944-9345.

Conn Organ, Rapsody Model, 25 bass pedals, 2 manual keyboards, 27 tone changes, with contained speakers and tremolo, beautiful hand-rubbed mirror-finish red mahogany, custom finished, beautiful furniture piece as well as a magnificent musical instrument. Purchased for \$2400, sell \$1200. David Bell, 591-2340.

Loaded 1967 Honda 300 Superhawk red finish, electric starter. \$495. Phyllis Morton, 946-4752.

Dachund puppies from registered stock, \$25 each. All are black with red markings. Available immediately. Call 591-3286.

1 Male Siamese kitten, 7 weeks old, \$10, 877-2867, Stu Roosa.

Minolta—16Ps sub-miniature camera. Case and manual, like new, \$12. Archery equipment, 35 lb fiberglass bow, arrows, quiver, and glove, \$12. Sunbeam electric broom with manual, \$10. Kodak Starflex camera, flash attachment, roll color film, and bulbs, \$6. Sears/Marlin semi automatic 22 rifle, cleaning kit, 200 rounds, and manual, \$35. Marlo Krisberg, 944-4319.

Signal Generator (Eico Model 3C4) \$25; 3" Oscilloscope (RCA Model WO-33A) \$60; Short wave receiver (Hallicrafer Model S-107) \$50; 6 meter converter (LaFayette Model HE-58) \$20; resistance capacitance bridge (Eico Model 950) \$20; 2 1/4x3 1/4 speed graphic (15 yrs old) \$50; 35mm Ricoh automatic camera f2.8 (\$75.new) \$35; RF wave strength meter, \$5. SWR bridge and RF power meter, \$12. Richard E. Cox, 944-0366.

1000 assorted hats, horns, noise makers and party favors. Will sell all or part. Reasonable. Ann Fields, 877-3392 after 5 weekdays, all day Saturday.

Solid, mahogany paneled camping trailer, cupboards, closet. No built-in appliances. \$225. Marlin 32 Special Deer Rifle and other guns. Rod Reining 946-6396.

Sears lightweight 2-wheel utility trailer; 1000 pound capacity; \$40; Bill Gatlin; 932-3969.

For sale or trade, 15 1/2 ft. Glastron, Mercury 400, 45 hp motor, jackets, tank, and small wheel tilt trailer \$825 or make offer. Trade for 1962-64 VW in good condition. Hartzog at 643-9971 after 5:30.

Dolphin Senior sailboat, one year old with hand trailer, \$400. Jimmy Hudson, 591-2168.

4 BBL carb. manifold for any 301, 318 c.i. Dodge, Plymouth, Chrysler engine. J. Whiteley, 946-3804.

67 Honda 50 like new, \$150. Linear Amplifier 4-1000A with power supply 2000 watts, \$275. Gordon Pulliam, HU 8-2250.

Transportation to LSU-Rice game. Bus leaves Clear Lake Country Club at 6 pm. Saturday, Sept. 28. Go direct to the game and return, \$2.25 per person. Cocktails at 5 pm. Please call HU 8-0250, Clear Lake Country Club for reservations and dinner if you wish.

16 hp Scott Atwater boat motor. Good condition. Lower unit just rebuilt, \$75. R. Newlin, 487-2121.

Custom made sofa, beige color, 90" long, damask texture, fully skirted, self decked, foam covered cushions that are reversible. Like new and perfect condition. Paid \$400. Will sell \$150. Like new nylon rug and separate rubber pad. 10'x10', both for \$55. Baby car bed and pad, \$4. New decorator vase 29" high \$7. Jack H. Cohen, HU 8-3171.

30-inch gas range, 8 months old, still in warranty. Made by division of General Electric, \$65. Ray Whitaker, 474-3136 (Seabrook).

Irish Setter pups. 5 weeks, hunting stock, National champion bloodlines, registered AKC and F.D.S.B., record of wins, \$75 females, \$100 males. Joy Morris, 227 Viceroy Drive, Phone 944-4705 after 5.

Sony TC-530 stereo tape recorder. Excellent condition. Retail price \$399. Sell for \$260; four new Super Sport wheel covers and 6x14 wheels (for wide oval tires). All for \$70. Will sell wheels and covers separate. Bill Ward, 932-5663.

Sampan, 14' fishing boat with 6 hp Mercury longshaft. Built in Hong Kong. Quick sale at \$225. E. Horton, 877-4102.

Albatross, 15 ft., fiberglass, center-board sailboat. 22 ft. mast, 125 square feet of sail, main, and jib. Boat, sails, and galvanized trailer in like new conditions, \$1150. Philip Maloney, HU 2-7688.

White German Shepherds. AKC registered, temporary shots. Pedigree furnished. Males \$135. Females \$125. Barbara Donaldson, 591-2601, Nassau Bay.

Dr. Liebhofsky Will Talk On "Return of X-Ray"

Dr. Herman A. Liebhofsky of Texas A&M will be the speaker at the Sept. 19th meeting of the Society of Applied Spectroscopy. Dr. Liebhofsky who is an honorary member of the SAS will speak on "A Return to X-Ray".

Tickets for the dinner-lecture may be obtained by calling Miss Ruby Keeler, MO 7-5661, ext. 223. The program which begins with a social hour at 6 P.M., will be held at the Ye Old College Inn, Houston.

Longhorn Game Films To Be Shown at MSC

Films of University of Texas 1968 football games will be shown on Wednesdays following each weekend game.

The films which are being presented by the Clear Lake Texas Exes Club will be shown on Sept 25 in Room 378 in Bldg 4 beginning with U of T versus University of Houston game.

Almost new, yellow Westinghouse deluxe electric stove. Sacrifice for \$180; Free "Oil drum" style barbecue. First to come gets it. Sears Coldspot window air conditioner. 6,500 BTU's, 110 volts, like new, \$80. Stud service. Basset hound, top show quality AKC reg, tri-color. Bob Law, 944-7596.

WANTED

Want to join or start carpool from Baytown, 8:30-5:00 Norman R. Schulz, ext. 2901.

Wicker dining table and 4 wicker chairs with arms and backs. Good condition. Sandy Cooper, 944-9026.

One copy of the December 1965 special issue of the "Proceedings of the IEEE" for use in office. Jim Bates, 3816 (no home phone).

Girl to share apartment with same in Clear Lake City area. Lindy Barrow, 488-2880.

Used Rotary lawnmower, must be in good condition. Jack H. Cohen, HU 8-3171.

Want to join or start car pool from Sage-mont 8:30 to 5:00. Bob J. Miller ext. 2901.

One set of ladies golf clubs. Contact Doris Storey, GR 4-4176 before 5.

68 Corvette. Will pay up to \$4000. E. Horton, 877-4102.

YOC Student (Wheatley) needs ride. Has job at MSC as one of 12 outstanding YOC's this summer, but must arrange transportation from Fifth Ward area for 1/2 day employment. Can arrange school schedule to fit. Needs the job and needs transportation. Please call Marsadell Reagan, CA 7-7523, or contact Joy Morris or Sarah Lopez in Astronaut Office.

Ride wanted for daughter between University of Houston and Clear Lake City. HU 8-4346.

Wanted, good homes for half-persian kittens, free. Mother is pedigreed, grand-champion blood line blue cream. Dave DeAtkine, HU 7-1556.

Wanted, set of childrens right hand golf clubs, girls and boys English bikes. H. M. Hughes, 591-2287.

Wanted to trade Big Bonus stamps for equal number of S&H Green stamps. Call Jonny Ferguson at 747-0403.

Wanted a fifth member for car pool from Gulfgate to MSC, 8 to 4:30, call Jonny Ferguson at 747-0403.

Wanted, ride, riders, or carpool. Area of Cotswold Village-Winkler apts. 8:30-5:00. Marlo Krisberg, 944-4319 ext. 2755.

Want to join or start carpool from U. of H. area, 8 to 4:30, Richard France, ext. 5871.

Share driving from Gilbert Apartments, 7925 Gulf Freeway, to NASA-MS, 8:00-4:30 shift. Leota White, MI 3-3141 evenings.

Wanted to buy: old model airplane engines, engine parts, or old model airplane kits. Engines do not have to be in working condition. James W. Moore, Jr.; 528-2101.

Black Beagle with Brown marking and feet, no collar, very friendly, loves children. Lost Sept. 4 from Ellington A.F.B. Reward. Call 483-4278 or 487-3282, Faye Roys.

Need ride. Carriage Park Apts., 8206 Gulf Freeway, to MSC, 8:00 to 4:30. Vicki Sutton, 644-4561.

Need ride for evening class to San Jacinto College. G. Cohen, HU 8-3171.

MSC To Probe Northern Lights



FILL 'EM UP—Technicians at the National Center for Atmospheric Research (NCAR) at Palestine, Texas ready balloon flight for MSC Science and Applications Directorate. Test flights at the NCAR site verified performance of instrument package which will probe northern lights.

Texas Balloon Flights Test Science Package

An instrument package designed to probe the northern lights (Aurora Borealis) has undergone two successful balloon test flights at Palestine, Texas within the past two weeks.

These tests clear the way for 12 flights this fall from central Alaska. The flights, which will carry a 30-lb scientific package to more than 22 miles over Alaska are being conducted by the NASA manned Spacecraft Center's Science and Applications Directorate.

On the first flight the one-by-four foot instrument package was carried to an altitude of 97,000 feet over central Texas. A 135,000 cubic-foot balloon was used to launch the payload from the National Center for Atmospheric Research (NCAR) facility at Palestine.

The MSC experiment package performed successfully, according to telemetry received at the ground station. Don Pierson of MSC's Astronomy Branch (Science Directorate) said test objectives of the initial flight were met despite a premature shutdown of the balloon. The experiment package was successfully recovered near Corsicana, approximately 55 miles from the launch site.

The second flight of the MSC experiment package was made aboard a 10.6 million cubic foot (helium filled) balloon. The instruments rode "piggyback" with a NCAR project launched from the Texas site.

Telemetry received at the ground station indicated all systems performed satisfactorily, Pierson said. Recovery of the payload was made near Prescott, Arizona following an 1,100 mile journey from east Texas.

Object of the 12 flights, which are scheduled to be launched from Eielson Air Force Base (near Fairbanks) Alaska, is to obtain data on the ionized particles within the northern lights. The experiment is designed to take X-rays of the electrons that produce the northern lights.

Data collected during the Alaskan flights will be correlated

with information gathered by the Application Technology Satellite (ATS-1) now orbiting 21,800 miles over the earth.

Dr. T. J. Rosenberg of the University of Maryland is co-investigator for the project. He is formerly of Rice University.

Lockheed Electronics Company of Houston is support contractor.

MSC Bridge Club News

The MSC Duplicate Bridge Club will hold its annual Men's Pairs/Women's Pairs Championships concurrently on Sept. 17 at Bldg. 336, Ellington AFB. Playing time is 7:30 P.M. and pairs for both tournaments are needed to fill the 5 table minimums.

APOLLO'S POWERHOUSE—

Fuel Cell Completes Triple-Lifetime Test

A fuel cell used to supply electrical power to the Apollo spacecraft has operated for more than three times its design lifetime in a test completed at MSC.

The Apollo Command and Service Module fuel cell manufactured by Pratt & Whitney Aircraft Division—United Aircraft Corporation, performed for a total of 1,526 hours in the three-phase test conducted at MSC's Thermochemical Test Facility and at the contractor's facility in East Hartford, Connecticut.

The first phase of the test was designed to duplicate fuel cell launch pad heat-up, power profile and cool-down conditions that would be experienced if launch were delayed by numerous holds. Three launch window profiles, each lasting seven-and-a-half days and providing a total of nine launch opportunities, were simulated. At the end of the third launch window the fuel cell was shipped to Pratt & Whitney Aircraft for vibration tests to simulate an Apollo/Saturn V launch.

Satellite Trio Ordered 'Off'

Three successful National Aeronautics and Space Administration Pegasus meteoroid technology satellites were silenced August 29 after three years of successful operation.

Commands shutting off all systems in the huge satellites, leaving them dead in Earth orbit, were sent during the morning and afternoon of the 29th.

The demise of the satellites marks the end of more than three years of operation in orbit for each. They were designed for lifetimes of 18 months from their 1965 launch dates, Feb. 16, May 25, and July 30. Pegasus A was silenced at 2:13 p.m., B at 12:48 p.m. and C at 10:20 a.m. EDT.

The satellites, with "wing-spreads" of 96 feet from tip to tip, were seen by millions of people around the world as they reflected the Sun's rays.

The craft were visible after dark to the unaided eye from locations up to 45 degrees north and south of the Equator.

Each satellite has "wings" containing about 2,000 square feet of meteoroid detector panels. The panels, actually capacitors holding an electric charge, were discharged momentarily by the penetration of a meteoroid. This discharge was telemetered to Earth and recorded as a strike.

The combined operation time without any loss of prime experiment data due to electronic failure and the reliability of the cores and electronics of Pegasus may have considerable influence on data-gathering techniques used on future spacecraft.

"PREPARED TO WALK"

Geologist Relives Prague Take-Over by Russians

"We were quite prepared to walk out!"

So stated Dr. Elbert King of the NASA Manned Spacecraft Center who along with hundreds of other Americans fled Czechoslovakia when Russian military forces pushed into that central European country.

Dr. King was among several hundred delegates attending the 23rd International Geological Congress in Prague, Czechoslovakia at the time of the Russian invasion in the pre-dawn hours of August 21. King was scheduled to appear before the scientific congress on August 23 and present a technical paper, one which he was unable to give because of his unscheduled and unusual departure.

Happiness to Sadness

The events surrounding those tension-filled hours in Prague read like a scenario of a James Bond spy-thriller. The mood of the Czech people changed from one of exhilaration and excitement to one of defiance and tears, King recalled.

"Throughout our entire visit, before the invasion, the Czech people were extremely cordial and very helpful. After the Russians entered, people on the street began to cry. They were very despondent and unhappy at this turn of events," Dr. King stated. "It seemed the invasion came as a total surprise to the man on the street."

First indication of trouble came about 2 a.m. on August 21, he recalled, when he was awakened by the sound of low-flying aircraft.

"Although it occurred to me perhaps the Russians had invaded the country I got up and went to the hotel window and looked around," he said. "I didn't see any other lights or signs of excitement. I thought it was some sort of routine military exercise being held by the Czechs, so I went back to bed."

When they went to the hotel restaurant for breakfast it was apparent there was some serious difficulty.

Tanks in Streets

Tanks and armored vehicles rolled in the streets by the hotel and fighter and bomber aircraft flew over head, Dr. King said. Waitresses were in tears, the Czech national anthem blared over the radio, ambulances raced up and down, and small arms fire cracked in the distance, he related.

"We immediately tried to get through to the American Embassy. When we finally did get a line through, they advised us to stay off the streets and remain in the hotel until further word."

At 6:30 a.m. on August 23—two days after the invasion—word came from the Embassy. A motorcade was being formed in the town of Rudna, west of Prague and all Americans were advised to be there no later than 10:30 that morning. Dr. King and his wife, Peggy, joined up

with Dr. and Mrs. Fred Bullard of the University of Texas and began the trek out of Prague.

Normally the trip to Rudna would be easy, Dr. King explained, "but the Czechs had removed street signs and house numbers to harass the Russians in trying to find their way around the city."

Armed with a street map and directions from the hotel desk clerk, the Kings and Bullards set out for Rudna in Professor Bullard's auto. No difficulties were encountered until they reached the eastern end of the Vltava River bridge.

Stopped by Troops

They stopped to ask a machine-gun toting Russian soldier for directions. "He couldn't understand English and we knew little Russian," Dr. King related. The soldier waved them on and they cautiously moved along between rows of tanks.

"As we got to the end of the bridge two Russian soldiers—one on each side of the car—blocked the road. One of them motioned us ahead and the other looked as though he was motioning us to stop. We thought the best thing to do was proceed ahead which we did—without incident," he said.

After leaving Prague, the group came upon another roadblock of tanks where a Russian officer was stopping and turning all vehicles around. "We were at a loss until a Czech who was standing beside the road directed us to cross through a clover field. We took his advice and drove for about a kilometer where we finally intersected a road. Another Czech on a motorcycle led us to the highway behind the blockade," Dr. King said.

The group finally reached Rudna, met up with the other Americans and Embassy officials and proceeded southwest out of Czechoslovakia. Approximately 125 vehicles made up the motorcade.

The trip out was relatively uneventful, except for brief delays to permit tanks to cross the road, Dr. King said. While passing through one Czech town a group of factory workers lined the road, flashing "V" for victory signs and waving Czech flags. "One worker dropped a flag into our car and shook our hands," he said.

100 Mile Trip

After a journey of approximately 100 miles which took seven and a half hours the motorcade reached the German border where it was met by American officials and military police.

"We were a little relaxed at this point—an American MP, with a decided southern accent directed us to a checkpoint where we were served hot coffee and food."

Looking back over the experience, Dr. King remarked "If we had to, we were quite prepared to walk out."